

Figure 2: Addition of Heterologous Epitopes to Cytotoxic T-cell Inducing Sequence

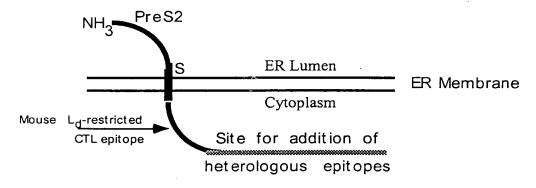


Figure 3

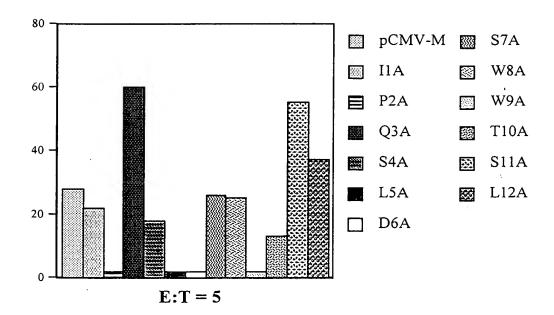
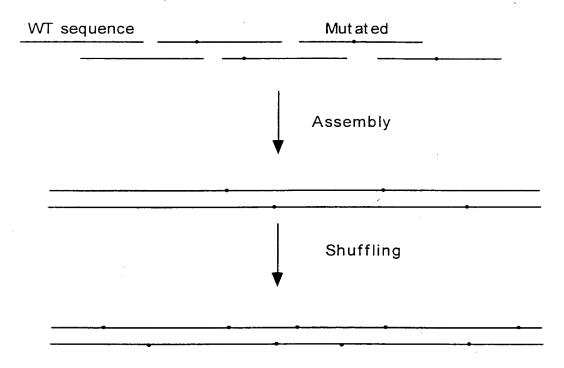


Figure 4: Method of preparing immunogenic agonist sequences (IAS)



Poly-epitope region containing potential agonist sequences

Figure 5

Improving immunostimulatory sequences (ISS) by DNA shuffling

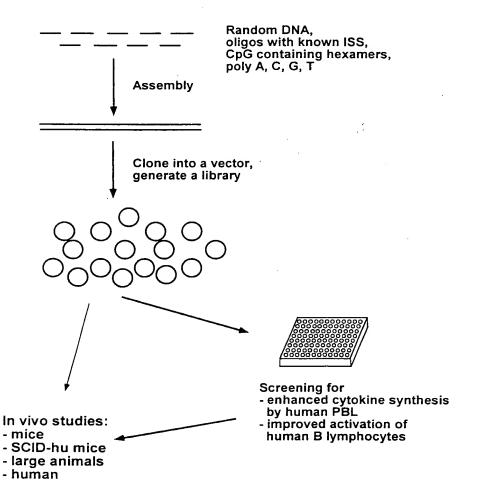


Figure 6: Screening of libraries of human IL-12 genes

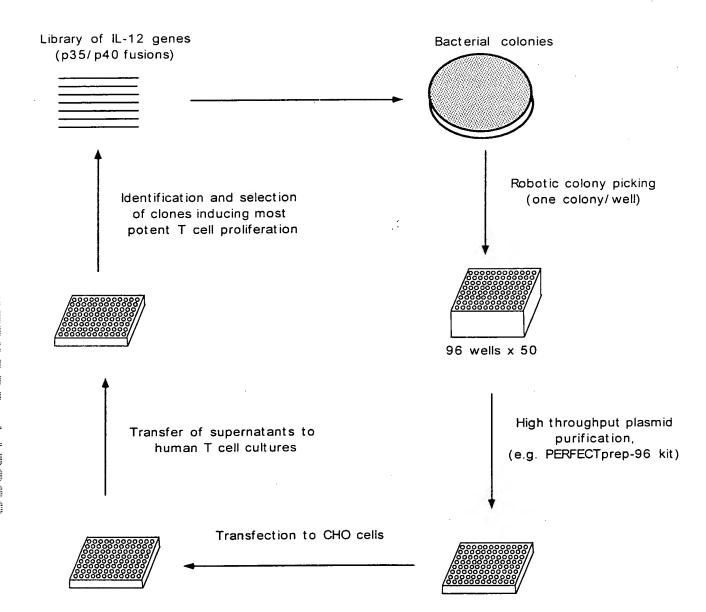


Figure 7

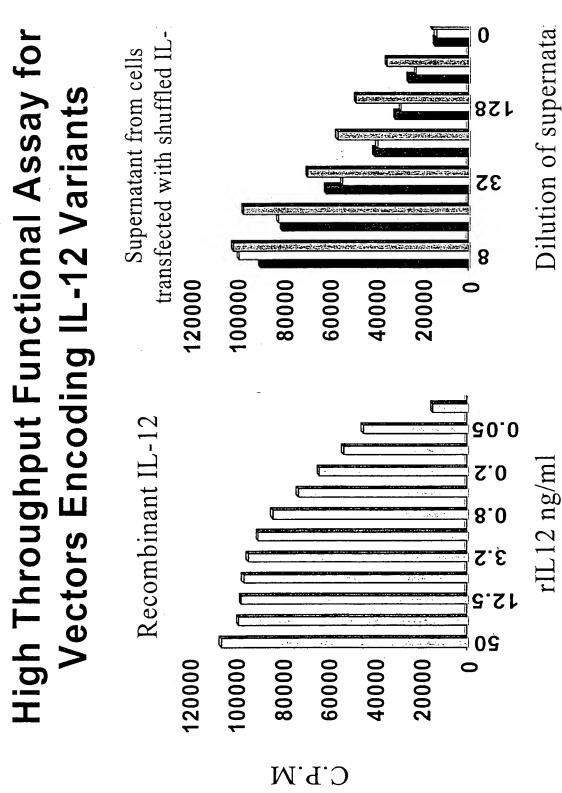


Figure 8

cell Proliferation Induced by Individual Transfected Vectors Encoding IL-12

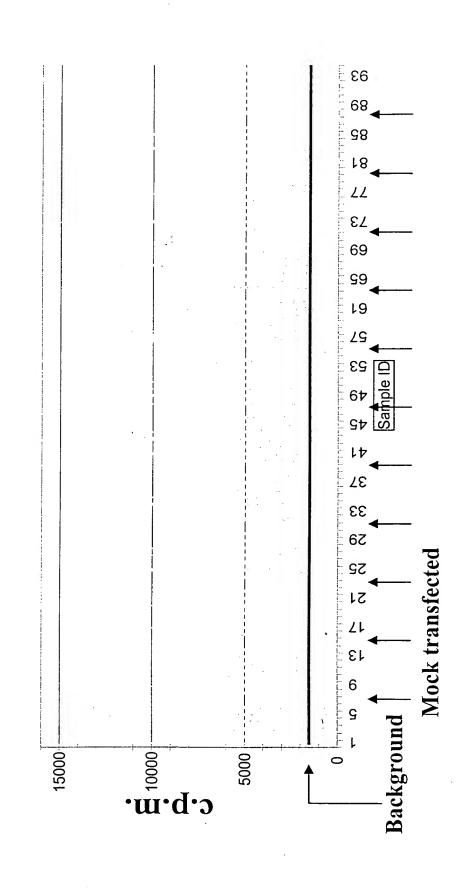


Figure 9

Provides Improved Human T cell activation Vector with Shuffled IL-12 Chimera

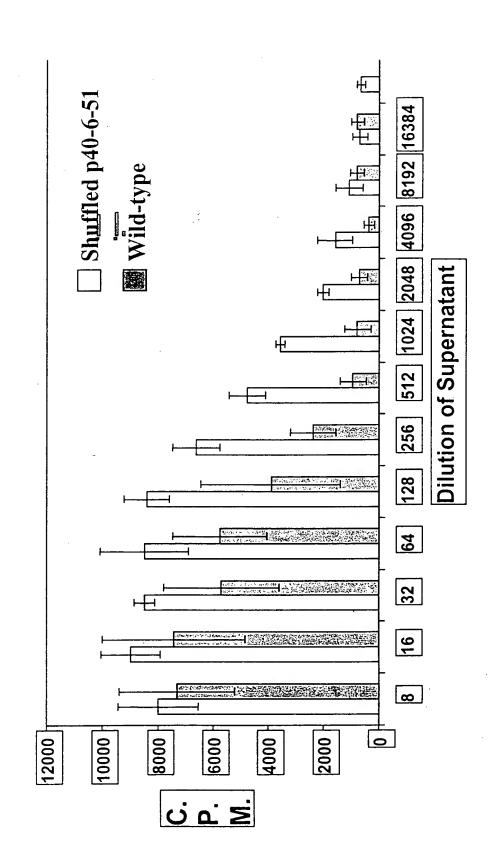


Figure 10

Model of induction of T cell activation or anergy by genetic vaccine vectors encoding different CD80 and/or CD86 variants

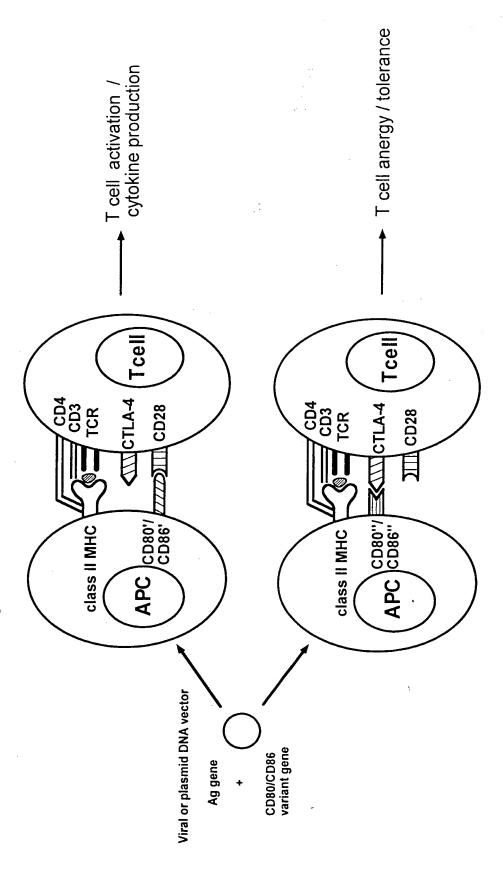


Figure 11

Screening of CD80/CD86 variants that have improved capacity to induce T cell activation or anergy

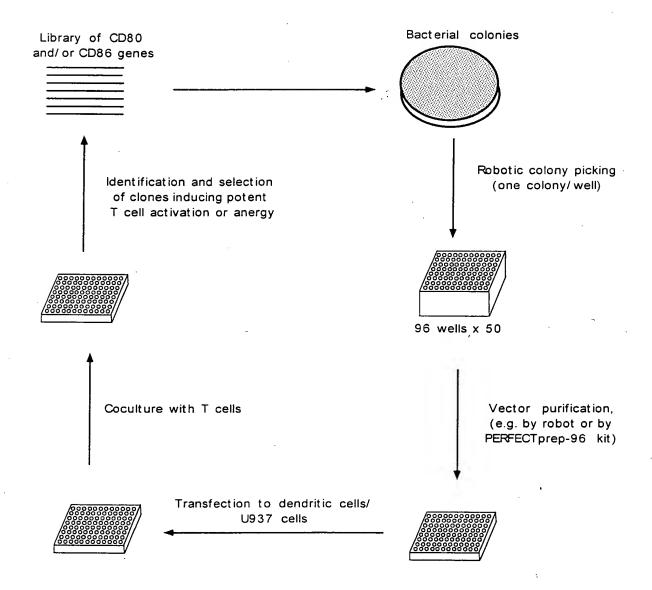


Figure 12

Screening Assay for Altered Function of B7

Proliferation of human peripheral blood T cells in response to anti-CD3 mAbs and COS-7 cells transfected with B7-1

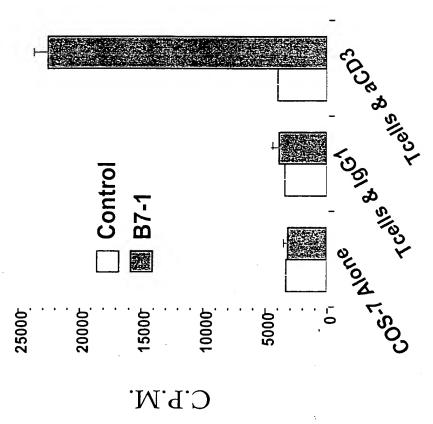
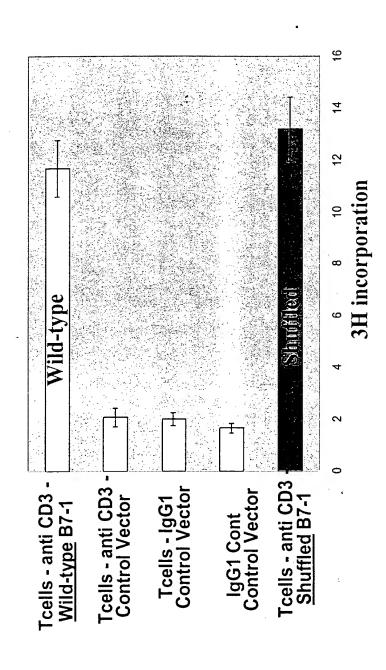


Figure 13

Shuffled B7-1 Chimeras Provide Potent T cell Activation



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Figure 14: Alignment antagonists	Alignment of human and mouse IL-10 receptor sequences illustrating the feasibility of family shuffling when evolvi antagonists.
IL-10R_DNA-seq Mouse_IL-10R_seq	1 AAAGAGCTGGAGGCGCGCGCCGGCTCCGCTCCGGCCCCGGACG CCATTGTGCTGGAAAGCAGGACGCGCCGGCCGGAGGCGTAAAGGCCGGCTCCAGTGGACG
IL-10R_DNA-seq Mouse_IL-10R_seq	61 ATGCGGCGCGCCCAGGATGCTGCCGTGCCTCGTAGTGCTGCTGGCGGCGCTCCTCAG ATGCCGCTGTGCCCCAGGATGTTGTCGCGTTTGCTCCCATTCCTCGTCACGATCTCCAG
IL-10R_DNA-seq Mouse_IL-10R_seq	121 CCTCCGTCTTGGCTCAGACGCTCATGGGACAGAGCTGCCCAGCCCTCCGTCTGTGTGTG
IL-10R_DNA-seq Mouse_IL-10R_seq	240 TGAAGCAGAATTTTTCCACCACATCCTCCACTGGACACCCATCCCAAATCAGTCTGAAAG TGAAGCCAGATTTTTCCAGCACATCCTCCACTGGAAACCTATCCCAAACCAGTCTGAGAG
IL-10R_DNA-seq Mouse_IL-10R_seq	300 TACCTGCTATGAAGTGGCGCTCCTGAGGTATGGAATAGAGTCCTGGAACTCCATCTCCAA CACCTACTATGAAGTGGCCCTCAAACAGTACGGAAACTCAACCTGGAATGACATCCATAT
IL-10R_DNA-seq Mouse_IL-10R_seq	361 CTGTAGCCAGACCCTGTCCTATGACCTTACCGCAGTGACCTTGGACCTGTACCA CTGTAGAAAGGCTCAGGCATTGTCCTGTGATCTCACAACGTTCACCCTGGATCTGTATCA
IL-10R_DNA-seq Mouse_IL-10R_seq	361 CAGCAATGGCTACCGGGCCAGAGTGCGGGCTGTGGACGGCAGCCGGCACTCCAACTG CCGAAGCTATGGCTACCGGGCCAGAGTCCGGGCAGTGGACAACAGTCAGT
IL-10R_DNA-seq Mouse_IL-10R_seq	421 GACCGTCACCAACACCCCGCTTCTCTGTGGATGAAGTGACTCTGACAGTTGGCAGTGTGAA GACCACCACTGAGACTCGCTTCACAGTGGATGAAGTGATTCTGACAGTGGATAGCGTGAC

540 CCTAGAGATCCACAATGGCTTCATCCTCGGGAAGATTCAGCTACCCAGGCCCAAGATGGC TCTGAAAGCAATGGACGGCATCATGGGACAATCCATCCCCCCAGGCCCACGATAAC	600 CCCCGCGAATGACACATATGAAAGCATCTTCAGTCACTTCCGAGAGTATGAGATTGCCAT CCCTGCAGGGGATGAGTACGAACAAGTCTTCAAGGATCTCCGAGTTTACAAGATTTCCAT	601 TCGCAAGGTGCCGGGAAACTTCACGTTCACACACAAGAAAGTAAAACATGAAAACTTCAG CCGGAAGTTCTCAGAACTAAAGAATGCAACCAAGAGAGTGAAACAGGAAACCTTCAC	720 CCTCCTAACCTCTGGAGAAGTGGGAGAGTTCTGTGTCCAGGTGAAACCATCTGTCGCTTC CCTCACGGTCCCCATAGGGGTGAGAAAGTTTTGTGTCTAAGGTGCTGCCCCGCTTGGAATC	721 CCGAAGTAACAAGGGGATGTGGTCTAAAGAGGGGGTGCATCTCCCTCACCAG.GCAGTA CCGAATTAACAAGGCAGAGTGGTCGGAGGAGCAGTGTTTACTTATCACGACGGAGCAGTA	840 TTTCACCGTGACCAACGTCATCTTCTTTGCCTTTGTCCTGCTGCTCTCCGGAGCCCT TTTCACTGTGACCAACCTGAGCATCTTAGTCATATCTATGCTGCTATTCTGTGGAATCCT	900 CGCCTACTGCCTGGCCCTCCAGCTGTATGTGCGGCGCCGGAAAGAAGCTACCCAGTGTCCT GGTCTGTCTGGTTCTCCAGTGGTACATCCGGCACCCGGGGAAGTTGCCTACAGTCCT	901 GCTCTTCAAGAAGCCCAGCCCCTTCATCTTCATCAGCCAGC	1020 AGACACCATCCACCCGCTTGATGAGGAGGCCTTTTTGAAGGTGTCCCCAGAGCTGAAGAA CGATGCCATTCACATCGTGGACCTGGAGGTTTTTCCCAAAGGTGTCACTAGAGCTGAGAGA
481	541	601	661	721	781	841	901	961
CCTAGAGATCCA	CCCCGCGAATGA	TCGCAAGGTGCC	CCTCCTAACCTC	CCGAAGTAACAA	TTTCACCGTGAC	CGCCTACTGCCT	GCTCTTCAAGAA	AGACACCATCCA
TCTGAAAGCAAI	CCCTGCAGGGGA	CCGGAAGTTCTC	CCTCACGGTCCC	CCGAATTAACAA	TTTCACTGTGAC	GGTCTGTCT	GGTCTTCAAGAA	CGATGCCATTCA
IL-10R_DNA-seq	IL-10R_DNA-seq	IL-10R_DNA-seq	IL-10R_DNA-seq	IL-10R_DNA-seg	IL-10R_DNA-seq	IL-10R_DNA-seq	IL-10R_DNA-seq	IL-10R_DNA-seq
Mouse_IL-10R_seq	Mouse_IL-10R_seq	Mouse_IL-10R_seq	Mouse_IL-10R_seq	Mouse_IL-10R_seg	Mouse_IL-10R_seq	Mouse_IL-10R_seq	Mouse_IL-10R_seq	Mouse_IL-10R_seq

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1021 CTTGGACCTGCACGCACACAGACAGTGGCTTTGGCAGCACCAAGCCATCCCTGCAGAC CTCAGTCCTGCATGGCAGCACCGACAGTGGCTTTGGCAGTGGTAAACCATCACTTCAGAC	1140 TGAAGAGCCCCAGTTCCTCCTCCTGACCCTCACCCCCAGGCTGACAGACGCTGGGAAA TGAAGAGTCCCAATTCCTCCTCCTGGCTCCCACCCCCAGATACAGGGGGACTCTGGGAAA	1200 CGGGGAGCCCCCTGTGCTGGGGGACAGCTGCAGTAGTGGCAGCAGCAATAGCACAGACAG	1260 CGGGATCTGCCTGCAGGCCCAGCCTGAGCCCCAGCACAGGGCCCCACCTGGGAGCAACA TGGGATCTGCCTGCAGGAGCCCGGCTTACACTCCAGCATGGGGGCCCGCCTGGAAGCAGCA	1320 GGTGGGGAGCAACAGCAGGGCCAGGATGACAGTGGCATTGACTTAGTTCAAAACTCTGA GCTTGGATATACCCATCAGGACCAGGATGACAGTGACGTTAACCTAGTCCAGAACTCTCC	1321 GGGCCGGGCTGGGGACACACAGGGTGGCTCGGCCTTGGGCCACCACAGTCCCCCGGAGCC AGGGCAGCCTAAGTACACACAGGATGCATCTGCCTTGGGCCATGTCTGTC	1381 TGAGGTGCCTGGGGAAGAAGACCCAGCTGCTGTGGCATTCCAGGGTTACCTGAGGCAGAC TAAAGCCCCTGAGGAAAAAACCCAAGTCATGGTGACATTCCAGGGCTACCAGAAACAGAC	1500 CAGATGTGCTGAAGAAGGCAACCAAGACAGGCTGCCTGGAGGAAGAATCGCCCTTGAC CAGATGGAAGGCAGGCAGGCCCAGCAGAATGCTTGGACGAAGAGATTCCCTTGAC	1501 AGATGGCCTTGGCCCCAAATTCGGGAGATGCCTGGTTGATGAGGCAGGC
IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq

	1561 AGCCCTGGCCAAGGGCTATTTGAAACAGGATCCTCTAGAAATGACTCTGGCTTCCTCAGG AGCTCTGGCCGCAGGTTATTTGAAACAGGAGTCTCCAAGGGATGGCTTCTGCTCCACCAGG	1621 GGCCCCAACGGGACAGTGGAACCAGCCCACTGAGGAATGGTCACTCCTGGCCTTGAGCAG GACACCAAGTAGACAGTGGAATCAACTGACCGAAGAGTGGTCACTCCTGGGTGTGGTTAG	1740 CTGCAGTGACCTGGGAATATCTGACTGGAGCTTTGCCCCATGACCTTGCCCCTCTAGGCTG CTGTGAAGATCTAAGAAAGTTGGAGGTTTGCCCATAAACTTGACCCTCTGGACTG	1741 TGTGGCAGCCCCAGGTGGTCTCCTGGGCAGCTTTAACTCAGACCTGGTCACCCTGCCCCT TGGGGCAGCCCCTGGTGGCCTCCTGGATAGCCTTGGCTCTAACCTGGTCACCCTGCCGTT	1801 CATCTCTAGCCTGCAGTCAAGTGAGTGACTCGGGCTGAGAGGCTGCTTTTGATTTTAGCC GATCTCCAGCCTGCAGGTAGAAGAATGACAGCGGCTAAGAG.TTATTTGT.ATTCCAGCC	1920 ATGCCTGCTCCTCTGCCTGGACCAGGAGGGCCCCTGGGGCAGAAGTTAGGCACGAGGC ATGCCTGCTCCCTCTGTACCTGGGAGGCTCAGGAGTCAAAGAAAT	1921 AGTCTGGGCACTTTTCTGCAAGTCCACTGGGGCTGGCCCAGCCAG	2040 AGGGTGTCTGGGGCAGGAGGCCAACTCACTGAACTAGTGCAGGGTATGTGGGGTGGCACGGGGCAAGGAAAGGCCATCTTGATACACGAGTGTCAGGTACATGAGAGGTT	2100 CTGACCTGTTCTGTTGACTGGGGCCCTGCAGACTCTGGCAGAGCTGAGAAGGGCAG GTGGC.TAGTCTGCTGAGGGTCTGTAGATACCAGCAGAGCTGAGCAGGATTGACAG
(IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq

IL-10R_DNA-seq Mouse_IL-10R_seq	2160 GGACCTTCTCCCTCCTAGGAACTCTTTCCTGTATCATAAAGGATTATTTGCTCAGGGG.A AGACCTCCTCATGCCTCAGGGCTGGCTCCTACACTG.GAAGGACC.TGTGTTTGGGTGTA
IL-10R_DNA-seq Mouse_IL-10R_seq	2220 ACCATGGGGCTTTCTGGAGTTGTGGTGAGGCCACCAGGCTGAAGTCAGCTCAGACCCAGA ACCTCAGGGCTTTCTGGATGTGGTAAGACTGTAGGTCTGAAGTCAGCTGAG.CCTGGA
IL-10R_DNA-seq Mouse_IL-10R_seq	2221 CCTCCCTGCTTAGGCCACTCGAGCATCAGAGCTTCCAGCAGGAGGAAGGGCTGTAGGAAT TGTCTGCGGAGGT.GTTGGAGTGGCT.AGCCTGCTACAGGATAAAGGG
IL-10R_DNA-seq Mouse_IL-10R_seq	2340 GGAAGCTTCAGGGCCTTGCTGCTGGGGTCATTTTTAGGGGAAAAAAGGAGATATGATGGT AAGGCTCAAGAGATAGAAGGGCAGAGCATGAGCCAGGTTTAATTTT
IL-10R_DNA-seq Mouse_IL-10R_seq	2400 CACATGGGGAACCTCCCCTCATCGGGCCTCTGGGGAAGCTTGTCACTGGAAGATCT GTCCTGTAGAGATGGTCCCCAGCCAGGATGGGTTACTTGTGGCTGGGAGATCT
IL-10R_DNA-seq Mouse_IL-10R_seq	2461 TAAGGTATATATT.TTCTGGACACTCAAACACATCATAATGGATTCACTGAGGGGAGACA TGGGGTATACACCCCCTGAATGATCAGCCA.GTCAATTCAGAGCTGTGTGGCA
IL-10R_DNA-seq Mouse_IL-10R_seq	2461 AAGGGAGCCGAGACCCTGGATGGGGCTTCCAGCTCAGAACCCCATCCCTCTGGTG.GGTAC AAAGGGACTGAGACCCAGAATTTCTGTTCCTCTTGTGAGGTGT
IL-10R_DNA-seq Mouse_IL-10R_seq	2521 CTCTGGCACCCATCTGCAAATATCTCCCTCTCTCCAACAAATGGAGTAGCATCCCCCTGG CTCTGCTACCCATCTGCAGACAGACATCTTTCATCTTTTTACTATGGCTGTGTCCCC.TGA
IL-10R_DNA-seq Mouse_IL-10R_seq	2581 GGCACTTGCTGAGGCCAAGCCACTCACTTTGCTGCCCCACCATCTTGCTGAC ATTACCAGCAGTGGCCAAGCCATTACTCCCTGCTGCTC.ACTGTTGTGACGTC

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	2700 AACTTCCAGAGAAGCCATGGTTT.TTGTATTGGTCATAACTCAGCCCTTTGGGCGGCCT AGACCAGACCAGACGCTGTCTGTGTTAGTACACTACCCTTTAGGTGGCCT	2760 CTGGGCTTGGGCACCAGCTCATGCCAGCCCCAGAGGGTCAGGGTTGGAGGCCTGTGCTTG TTGGGCTTGAGCACTGGCCCA	2761 TGTTTGCTGCTAATGTCCAGCTACAGACCCAGAGGATAAGCCACTGGGC.ACTGGGCTGG CTTTTGCTGCTAATCTCTAACTGCAGACCCAGAGAACAGGGTGCTGGGCTGACACCTCCG	2821 GGTCCCTGCCTTGTTGGTGTTTCAGCTGTGTGATTTTTGG.ACTAGC.CACTTGTCAGAG TGTTCAGCTGTGTGACCTCCGACCAGCAGCTTCCTCAGGGGACTAAAATAATGACTAGGT	2940 GGCCTCAATCTCCCATCTGTGAAATAAGGACTCCACCTTTAGGG.GACCCTCCATGT CATTCAGAAGTCCCTCATGCTGAATGTTAACCAAGGTGCCCCTGGGGTGATAGTTTAGGT	3000 TTGCTGGGTATTAGCCAAGCTGGTCCTGGGAGAATGCAGATACTGTCCGTGGACTACCAA CCTGCAACCTCTGGGAAGGAAGTGGACTACGGAAGCCATCTGTCCCCCTG	3001 GCTGGCTTGTTTCTTATGCCAGAGGCTAACAGATCCAATGGGAGTCCATGGTGTCATGCC GGGAGCTTCCACCTCATGCCAGTGTTTCAGAGATCTTGTGGGAGCCTAGGGCCTTGTGCC	3120 AAGACAGTATCAGACACAGCCCCAGAAGGGGGCATTATGGGCCCTGCCTCCCCATAGGCC AAGGGAGCTGCTAGTCCCTGGGGTCTAGGGC.TGGTCCCTGCCTCCCTATACTGC	3121 ATTTGGACTCTGCCTTCAAACAAAGGCAGTTCAGTCCACAGGCATGGAAGCTGTGAGG GTTTGAGACCTGTCTTCAAATGGAGGCAGTTTGCAGCCCCCTAAGCAAGGATGCTGAGAGA
`	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq

3240 GGACAGGCCTGTGCGTGCCATCCAGAGTCATCTCAGCCCTGCCTTTCTCTGGAGCATTCT AG.CAGCAAGGC.TGCTGATC.CCTGAGCCCAGAGTTTCTCTGAAGCTTTCC	3241 GAAAACAGATATTCTGGCCCAGGGAATCCAGCCATGACCCCCCCC	3360 TCTTAGGTGCCAGTCTGGTAACTCCCTCTGGAGGCAGGCTTGAGGGAGG	3361 CAGGGTTCCCTTGAAAGCTTTATTTATTTTTTTTCATTTATTT	3421 ATTGCACAGTGAAAGAATTCTGGATATCTCAGGAGCCCCGAAATTCTAGCTCTGACTTTG GTGGCACAGGCGCAAGGCTCTTGGGTCTCTCAGGAGGTCTAGATTTGCCTGCC	3481 CTGTTTCCAGTGGTATGACCTTGGAGAGTCACTTATCCTCTTGGAGCCTCAGTTTCCTC CTGTTTCTAGCTGTGACCTTGGGCAAGTCACGTTTCCTCGTGGAGCCTCAGTTTTCCT	3500 ATCTGCAGAATAATGACTGACTTGTCTAATTCATAGGGATGTG GTCTGTATGCAAAGCTTGGAAATTGAAATGTACCTGACGTGCTCCATCCCTAGGAGTGCT	3601 AGGTTCTGCTGAGGAAATGGGTATGAATGTGCCTTGAACACAAAGCTCTGTCAATAAGTG GAGTCCCACTGAGAAAGCGGGCACAGACGCCTCAAATGGAACCACAAGTG
IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq	IL-10R_DNA-seq Mouse_IL-10R_seq
	3181 GGACAGGCCTGTGCGTGCCATCCAGAGTCATCTCAGCCCTGCCTTTCTCTGGAGCATT AG.CAGCAAGGC.TGCTGATC.CCTGAGCCCAGAGTTTCTCTGAAGCTTT	3181 GGACAGGCCTGTGCGTGCCATCCAGAGTCATCTCAGCCCTGCCTTTCTCTGGAGCATT AG.CAGCAGTGCTGATC.CCTGAGCCCAGAGTTTCTCTGAAGCTTT 3241 GAAAACAGATATTCTGGCCCAGGGAATCCAGCCATGACCCCCCCC	3181 GGACAGGCCTGTGCGTGCCATCCAGAGTCATCTCAGCCCTGCCTTTCTCTGGAGCATT AG.CAGCAAGGC.TGCTGATC.CCTGAGCCCCAGAGTTTCTCTGAAGCTTT 3241 GAAAACAGATATTCTGGCCCAGGGAATCCAGCCATGACCCCCCCC	3181 GGACAGGCCTGTGCGTGCCATCCAGAGTCATCTCAGCCCTGCCTTTCTCTGGAGCATT AG.CAGCAAGGC.TGCTGATC.CCTGAGCCCTGCCTTTCTCTGGAGCTTT 3241 GAAAACAGATATTCTGGCCCAGGGAATCCAGCCATGACCCCCCCC	3181 GGACAGGCCTGTGCGTGCCATCCAGAGTCATCTCAGCCCTGCCTTTCTCTGGAGCATT AG.CAGCAAGGC.TGCTGATC.CCTGAGCCCTGCCTTTCTCTGGAGCTTT 3241 GAAAACAGATATTCTGGCCCAGGGAATCCAGCCATGACCCCCCCC	3181 GGACAGGCCTGTGCCATCCAGAGTCATCTCAGCCCTGCCTTTCTCTGGAGCATT AG.CAGCAAGGC.TGCTGATC.CCTGAGCCCTGCCTTTCTCTGAAGCTTT 3241 GAAAACAGATATTCTGGCCCAGGGAATCCAGCCATGACCCCCCCC	3181 GGACAGGCCTGTGCGTGCCATCCAGAGTCATCTCAGCCCTGCCTTTCTCTGGAGCATT AG.CAGCAAGGC.TGCTGATC.CCTGAGCCCTGCCTTTCTCTGGAGCTTT 3241 GAAAACAGATATTCTGGCCCAGGGAATCCAGCCATGACCTCCCCCCTCTGCCGAGAA AATACAGACTGTGTGACGGGGTGAGGCCATGAACTTTGGCATCCTGCCGAGAA 3301 TCTTAGGTGCCAGTCTGGTAACTGAACTCCTTCTGGAGCTTTGGCATCCTGCCGAGAA 3361 TCTTAGGTGCCCTTGAACTGAACTGAACTCCTTTTTTTGGAGGCTTTGTTCTTGGAGGCAGCT CAT.GACCCTTGAAACTTTATTTATTTTTTTTTGGAACTTCTTGGAGGCAACTT GAGGGTTCCCTTGGAAACTTTATTTATTTTTTTTTT

IL-10R_DNA-seq Mouse_IL-10R_seq

ATACATGTTTTTTTTTCCAATAAATTGTCAAG.ACCAC....A GTGTGTGTTTTTC.ATCCTAATAAAAGTCAGGTGTTTTTGTGGA 3661

3703

Alignment of human, rhesus monkey and rabbit DNA sequences of B7-1 molecules (CD80) illustrating the feasibility of family shuffling Figure 15:

1 ATGGGCCACACACGGAGGCAGGAACATCACCATCCAAGTGTCCATACCTCAATTTCTTT ATGGGCCACACGGAGGCAGGAAATATCACCATCCAAGTGTCCATACCTCAAGTTTTTTT ATGGGCCACACGCTGAGGCCGGGAACTCCACTGCCCAGGTGTCTACACCTCAAGCTCTGC	
B7-1,_human_seq A1 37-1,_rhesus_monkey_seq A1 B7-1,_rabbit_seq A1	

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CAGCTCTTGGTGCTGGTCTTTCTCACTTCTGTTCAGGTGTTATCCACGTGACCAAG CAGCTCTTGGTGCTGGCTTGTCTTTCTCATTTCTGTTCAGGTGTTATCCACGTGACCAAG CTGCTCTTGGCGCTGGCGGGTCT....CCACTTCTTCTGGGTATCAGCCAGGTCACCAAG B7-1, human_seg ,_rhesus_monkey_seg _B7-1,_rabbit_seg

180 GAAGTGAAAGAAGTGGCAACGCTGTCCTGTGGTCACAATGTTTCTGTTGAAGAGCTGGCA GAAGTGAAAGAAGTGGCAACGCTGTCCTGTGGTCACAATGTTTCTGTTGAAGAGCTGGCA TCGGTGAAAGAAATGGCAGCACTGTCCTGTGATTACAACATTTCTATCGATGAACTGGCG B7-1, human_seq rhesus_monkey_seq B7-1, rabbit_seq

CAAACTCGCATCTACTGGCAAAAGGAGAAAAATGGTGCTGACTATGATGTCTGGGGAC CAAACTCGCATCTACTGGCAAAAGGAGAAAAATGGTGCTGACTATGATGTCTGGGGAC AGAATGCGCATATACTGGCAGAAGGACCAACAGATGGTGCTGAGCATCATCTCTGGGCAA B7-1, human_seq rhesus_monkey_seq B7-1, rabbit_seq

ATGAATATATGGCCCGAGTACAAGAACCGGACCATCTTTGATATCACTAATAACCTCTCC ATGAATATATGGCCCGAGTACAAGAACCGGACCATCTTTGATATCACAAATAACCTCTCC GTGGAAGTGTGGCCTGAGTACAAGAACCGCACCTTCCCCGACATCATTAACAACCTCTCC B7-1, human_seg_rhesus_monkey_seg_B7-1,_rabbit_seg ATTGTGATCCTGGCTCTGCGCCCATCTGACGAGGGCACATACGAGTGTGTTGTTCTGAAG ATTGTGATTCTGGCTCTGCGCCCATCTGACGAGGGCACATACGAGTGTGTTGTTCTGAAG CTTATGATCCTGGCACTGCGCCTGTCGGACAAGGGCACCTACACCTGCGTGGTTCAGAAG B7-1, human_seq rhesus_monkey_seq B7-1, rabbit_seq

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Figure 15 (continued)		

B7-1, human seg _rhesus_monkey_seg _B7-1,_rabbit_seg	361 TATGAAAAAGACGCTTTCAAGCGGGAACACCTGGCTGAAGTGACGTTATCAGTCAAAGCT TATGAAAAAGATGCTTTCAAGCGGGAACACCTGGCTGAAGTGATGTTATCCGTCAAAGCT AATGAGAACGGGTCTTTCAGACGGGAGCACCTGACCTCCGTGACACTGTCCATCAGAGCT
B7-1, human seq rhesus monkey seq B7-1, rabbit seq	421 GACTTCCCTACACCTAGTATATCTGACTTTGAAATTCCAACTTCTAATATTAGAAGGATA GACTTCCCTACACCTAGTATAACTGACTCTGAAATTCCACCTTCTAACATTAGAAGGATA GACTTCCCTGTCCCTAGCATAACTGACATTGGACATCCCGACCCTAATGTGAAAAGGATA
B7-1, human seq hesus monkey seq B7-1, rabbit seq	540 ATTTGCTCAACCTCTGGAGGTTTTCCAGAGCCTCACCTCTCCTGGTTGGAAATGGAGAA ATTTGCTCAAACTCTGGAGGTTTTCCAGAGCCTCACCTCTCCTGGTTGGAAATGGAGAA AGATGCTCCAAACTCTGGAGGTTTTCCAGAGCCTCGCCTCGCTTGGTTGG
B7-1,_human_seq _rhesus_monkey_seq _B7-1,_rabbit_seq	600 GAATTAAATGCCATCAACACAGTTTCCCAAGATCCTGAAACTGAGCTCTATGCTGTT GAATTAAATGCCATCAGCACACAGTTTCCCAAGATCCTGAAACTGAGCTCTATACTGTT GAACTAAACGCCGTCAACACGGCTTGACCAGGATTTGGACACGGGGGCTCTACAGCGTC
B7-1, human seq rhesus monkey seq B7-1, rabbit seq	601 AGCAGCAAACTGGATTTCAATATGACAACCAACCACGCTTCATGTGTCTCATCAAGTAT AGCAGCAAACTGGATTTCAATATGACAACCAATCACAGTTTCATGTGTCTCATCAAGTAT AGCAGTGAACTGGATTTCAATGTGACAAATAACCACAGCATCGTGTGTCTCATCAAATAC
B7-1, human seg rhesus monkey seg B7-1, rabbit seg	720 GGACATTTAAGAGTGAATCAGACCTTCAACTGGAATACAACCAAGCAAG
B7-1, human seg rhesus monkey seg B7-1, rabbit seg	721 GATAACCTGCTCCCATCCTGGGCCATTACCTTAATCTCAGTAAATGGAATT GATAACCTGCTCCCATCTGGGCCATTATCCTAATCTCAGTAAATGGAATT ATTGATCAGCTTCCATTTATCCCAGTAAGTGGTGCTTTGGTGCTCACTGCG

940 TTTGTGATATGCTGCCTGACCTACTGCTTTGCCCCAAGATGCAGAGAGAAGAAGAAT TTTGTGATATGCTGCCTGACCTACTGTTTTGCCCCAAGGTGCAGAGAGAAGAAGAAT GTAGTTCTCTACTGCCTGGCCTG	900 GAGAGATTGAGAAGGGAAAGTGTACGCCCTGTATA	901 906AA GGCTGA
B7-1,_human_seq	B7-1, human_seq	B7-1, human_seg
B7-1,_rhesus_monkey_seq	B7-1, rhesus_monkey_seq	B7-1, rhesus_monkey_seg
B7-1,_rabbit_seq	B7-1, rabbit_seq	B7-1, rabbit_seg